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New National Railway Museum exhibition showcases future of railway technology

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The National Railway Museum in York, is looking to the future with is brand-new exhibition, *Innovation Platform*.

The exhibition, which is scheduled to open on Wednesday 15 June and run through to Summer 2024, will feature examples of new technology that will explore how the future of the railways could look in Britain.

Visitors will be able to see exciting innovations in four exhibition seasons – Autonomous Technology, Decarbonisation, Smart Cities, and Communities. Each season will see different technologies and inventions demonstrated to visitors who will be able to experience how they work.

- National Railway Museum appoints industry figures to its Advisory Board
- National Railway Museum's Wonderlab to Receive £2.5m from The Liz and Terry Bramall Foundation

Innovation Platform also features as part of the York Festival of Ideas. On Saturday 18 June, at 11am and 1pm, visitors can join free guided tours of the exhibition. Museum and University of York staff will be on hand to talk about the exhibition, the technology on display, and answer questions.

Liv Mills, Exhibitions Project Manager at the National Railway Museum, said: "Innovation Platform offers a great opportunity for museum visitors of all ages to come and explore the technologies that will shape the future of the railways that they will travel on. We're really excited to be able to work with lots of different companies, organisations and partners to showcase this exhibition."

The Autonomous Technology season will kick off by looking at Driverless Transport which could help to transfer passengers to and from stations on the first and last legs of their journeys. Developed in association with the Assuring Autonomy International Programme (AAIP), a partnership between the University of York and Lloyd's Register Foundation, a mock-up cab will show three screens of footage filmed to imitate a driverless environment.

Museum visitors will be able to add different overlays to the footage which will show how algorithms are used in autonomous driving technology to spot objects and obstacles and help to categorise and identify them to inform how the vehicle reacts to them.

The AAIP's work aims to make sure that any autonomous technology that is introduced is assured to be safe. Professor John McDermid, Director of the AAIP, said: "As artificial intelligence and autonomous systems become increasingly mainstream, it's important that everyone, not just the engineers and the developers, are aware of how we assure the safety of these incoming systems.

"This exhibit with the National Railway Museum is a fantastic way to help the public understand how machine learning – an essential part of how an autonomous vehicle understands the world around it – works, and how the research we are doing can help them to trust that the system will work safely and as expected."

Autonomous Technology will then feature Prometheus, an inspection drone that will help Network Rail explore and map mine workings that extend under existing rail infrastructure, and ActiWheel, a partnership between universities and industry companies to revolutionise wheel sets on trains by using computer-based systems to deliver better cornering performance and reduce track damage.

Each season will be on display in the museum for six months at a time, with Autonomous Technology running from June to December 2022, Decarbonisation from December 2022 to May 2023, Smart Cities on display from June to December 2023, and Communities bringing in the New Year in 2024 to run until May.

Part of the Innovation Platform exhibition will also feature at Locomotion, Shildon, between January 2023 and December 2024.

To find out more about *Innovation Platform* and to book your free guided tour place, go to https://www.railwaymuseum.org.uk/whats-on/innovation-platform.

Photo credit: National Railway Museum